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In re Application No.

Application Number

09/061318

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I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

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(12) **United States Patent**
Bergman et al.

(10) Patent No.: **US 6,267,125 B1**
(45) Date of Patent: **Jul. 31, 2001**

(54) **APPARATUS AND METHOD FOR
PROCESSING THE SURFACE OF A
WORKPIECE WITH OZONE**

0 548 596 A2 6/1993 (EP).
0 702 399 3/1996 (EP).
2 287 827 9/1995 (GB).
52-12063 4/1977 (JP).

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/677,934**

(22) Filed: **Oct. 3, 2000**

Related U.S. Application Data

(60) Division of application No. 09/061,318, filed on Apr. 16,
1998, which is a continuation-in-part of application No.
08/853,649, filed on May 9, 1997.

(51) Int. Cl.⁷ **B08B 3/02**

(52) U.S. Cl. **134/102.1; 134/102.3;
134/148; 134/153; 134/902**

(58) Field of Search **134/102.1, 102.3,
134/102.2, 902, 186, 148, 153**

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(57) **ABSTRACT**

An apparatus for supplying a mixture of a treatment liquid and ozone for treatment of a surface of a workpiece, and a corresponding method are set forth. The preferred embodiment of the apparatus comprises a liquid supply line that is used to provide fluid communication between a reservoir containing the treatment liquid and a treatment chamber housing the workpiece. A heater is disposed to heat the workpiece, either directly or indirectly. Preferably, the workpiece is heated by heating the treatment liquid that is supplied to the workpiece. One or more nozzles accept the treatment liquid from the liquid supply line and spray it onto the surface of the workpiece while an ozone generator provides ozone into an environment containing the workpiece.

25 Claims, 6 Drawing Sheets

